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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/602,384
Filing Date: June 24, 2003
Appellant(s): MEHUS ET AL.

Kari H. Bartingale
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3/12/09 appealing from the Office action mailed 10/20/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6706533

Nomura et al.

3-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 – 7, 18 – 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (U.S. Pat. No. 6,706,533) (“Nomura”).

Regarding claims 1 – 3, 5, 18 – 22 and 24, Nomura teaches a concentration detection apparatus for determining the concentration of a user selectable product solution comprising: a conductivity probe 5; a temperature sensor 6; and a controller 9 that uses a predetermined algorithm or equation for calculating a concentration (see, e.g., col. 9, line 19 – col. 12, line 56; figure 1). The concentration value is calculated using a linear equation that is a function of temperature and conductivity based on previous empirical measurements on known standard solution concentrations (see, e.g., col. 7, lines 25 – 61; col. 13, line 16 – col. 15, line 45).

Nomura does not specifically teach the use of a resistance probe in place of the conductivity probe with the disclosed measurement device.

The applicant is advised that the Supreme Court recently clarified that a claim can be proved obvious merely by showing that the combination of known elements was obvious to try. In this regard, the Supreme Court explained that, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has a good reason to pursue the known options within his or her technical grasp.” An obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of the case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not. The combination of familiar elements is likely to be obvious when it does no more than yield predictable results. Furthermore, the simple substitution of one known element for another is likely to be obvious when predictable results are achieved. See *KSR Int’l v.*

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Teleflex Inc., 127 Sup. Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007). In this regard, the use of resistance probes in performing chemical measurements is very well known in the art (see MPEP 2144.03). Resistivity is merely the inverse of conductivity. The use of a resistance probe would have been predictable in facilitating a chemical concentration measurement with the disclosed measurement device. Therefore, it would have been obvious to a person of ordinary skill in the art to use a resistance probe with the disclosed measurement device in facilitating a concentration measurement.

Furthermore, the controller 9 can store information previously inputted for facilitating concentration value determination depending on what solutions are being used (see, e.g., col. 9, lines 20 – 49). Since disclosed detection apparatus comprises a programmed computer controller, the apparatus inherently comprises a memory feature (see, e.g., col. 4, lines 64 – 67). The apparatus can be used to monitor a plurality of different product agents, such as sodium carbonate, sodium hydroxide, etc. (see, e.g., col. 9, lines 5 – 12). It is considered predictable that the memory of the disclosed computer controller could store a plurality of different predetermined algorithms associated with different product agents. It would have been within the ambit of a person of ordinary skill in the art to store a plurality of different algorithms for different product agents within a memory feature of the disclosed apparatus to facilitate effective product monitoring for each of the product agents. The simple substitution of one known element, such as a predetermined algorithm in this instance, for another is likely to be obvious when predictable results are achieved. See *KSR Int'l v. Teleflex Inc.*, 127 Sup.

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Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate a memory feature storing a plurality of different predetermined algorithms associated with different product agents or classifications in order to effectively use the disclosed monitoring apparatus in monitoring different product agents.

Regarding claim 4, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a user interface, such as with a computer display monitor, to report the calculated concentration to a user.

Regarding claim 7, Nomura teaches that the disclosed apparatus can be used to prepare chemical solutions with a predetermined concentration (see, e.g., col. 1, lines 5 – 12). Therefore, it would have been obvious to a person of ordinary skill in the art to further control the addition of a product solution to the use solution when the concentration falls below a predetermined concentration level.

(10) Response to Argument

Appellant argues, “Claim 1 recites, among other things, a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and a predetermined algorithm associated with a product classification of the product in the selected use solution... Nomura merely describes determining a set of constants for each agent to be measured. Importantly, Nomura does not teach or suggest that the agents are further grouped into product classifications. As a result, Nomura cannot and does not teach or

suggest that each of a plurality of predetermined algorithms is associated with a different one of a plurality of product classifications, as recited in independent claim 1.”

Regarding claim 1, these claims comprise intended use limitations, which do not further delineate the structure of the claimed apparatus from that of the prior art, i.e. a memory that stores a plurality of algorithms, each associated with a different one of a plurality of product classification. Since these claims are drawn to an apparatus statutory class of invention, it is the structural limitations of the apparatus, as recited in the claims, which are considered in determining the patentability of the apparatus itself. These recited process or intended use limitations are accorded no patentable weight to an apparatus. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. *If the prior art structure is capable of performing the intended use, then it meets the claim.* See *In re Casey*, 152 USPQ 235 (CCPA 1967); and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The Courts have held that it is well settled that the recitation of a new intended use, for an old product, does not make a claim to that old product patentable. See *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). The Courts have held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987) (see MPEP § 2114).

Appellant argues, “Nomura further cannot and does not teach or suggest a controller that determines the concentration of an agent based on one of the plurality

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o/the predetermined algorithms associated with a product classification, as is also recited in claim 1.” The Examiner maintains that the controller 9 can store information previously inputted for facilitating concentration value determination depending on what solutions are being used (see, e.g., col. 9, lines 20 – 49). Since disclosed detection apparatus comprises a programmed computer controller, the apparatus inherently comprises a memory feature (see, e.g., col. 4, lines 64 – 67). The apparatus can be used to monitor a plurality of different product agents, such as sodium carbonate, sodium hydroxide, etc. (see, e.g., col. 9, lines 5 – 12). It is considered predictable that the memory of the disclosed computer controller could store a plurality of different predetermined algorithms associated with different product agents. It would have been within the ambit of a person of ordinary skill in the art to store a plurality of different algorithms for different product agents within a memory feature of the disclosed apparatus to facilitate effective product monitoring for each of the product agents. The simple substitution of one known element, such as a predetermined algorithm in this instance, for another is likely to be obvious when predictable results are achieved. See *KSR Int’l v. Teleflex Inc.*, 127 Sup. Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate a memory feature storing a plurality of different predetermined algorithms associated with different product agents or classifications in order to effectively use the disclosed monitoring apparatus in monitoring different product agents.

The Appellant argues, “the Final Office Action merely asserts that it would be “predictable” to “store a plurality of different programs associated with different product

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agents." Then, without ever making any kind of connection between agents and product classifications, or articulating any rational reason for doing so, the Final Office Action makes the conclusory statement that "it would have been obvious to incorporate a memory feature storing a plurality of different predetermined algorithms associated with different product agents or classifications in order to effectively use the disclosed monitoring apparatus in monitoring different product agents." It is noted that "product classification" is only mentioned 1 time in the specification and can be seen on paragraph 48, "In a preferred embodiment, a user of concentration monitor 18 could select an algorithm, or look up table, from memory 30 from eight settings based on *product classification*. The desired equation or look up table would be used to determine the concentration of use solution 20 and, hence, control the addition of concentrate to use solution 20."

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Samuel P Siefke/
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/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797

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Acting SPE of Art Unit 1797